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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,449	03/09/2001	Peter W. Johnson	PJ0101US	7014

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EXAMINER

LIU, MING HUN

ART UNIT PAPER NUMBER

2697

DATE MAILED: 12/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,449

Applicant(s)

JOHNSON, PETER W.

Examiner

Ming-Hun Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to because the label for an item in Figure 1 was placed too high on the paper and thus was eliminated after hole-punching the file. A proposed drawing correction is required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 9 is objected to because on the first line of the claim, the words 'claim of' are repeated. Appropriate correction is required.

Claim Rejections - 35 USC § 102

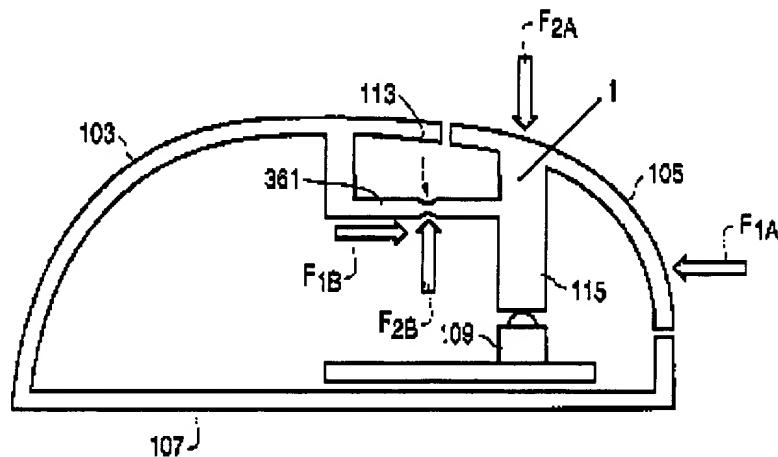
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent number 6,323,843 to Giles. Giles describes a button assembly that is very similar to the claimed invention. Giles discloses in figure 3 a button assembly comprising a first cantilever beam (361) having a first end and second end, the first end being configured to be attached to an electronic

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input device through a first fulcrum (113) at the first end; a second cantilevered beam (105) having an exposed button portion (105), the second cantilevered beam being attached to the first cantilevered beam through a second fulcrum (1). As seen from the figure, the second fulcrum attaches the second cantilevered beam to the first cantilevered beam at the second end of the first cantilevered beam. A plunger (115) attached to the second cantilevered beam and extends from the second cantilevered beam through the first cantilevered beam (361). In column 5, line 7-9, Giles discloses that the button can be constructed from a single piece of molded plastic.

**FIG. 3**

Prior Art: Figure 3 of US Patent 6,323,843 to Giles

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 -20 rejected under 35 U.S.C. 103(a) as being unpatentable over Giles.

In reference to claim 5, Giles describes a computer pointing input device (Column 1, line 9) in his invention. Referring to figure 3, it is clear that Giles, discloses computer input device comprising a housing (103 and 105) a palm portion of the housing configured to receive a user's hand (103) with a distal portion of the housing extending generally away from the palm portion; a switch button (105) having a palm end (area affected by force F_{1A}) and a distal end (area affected by force F_{2A}) the switch button being configured to actuate an electronic switch (109) within the computer pointing input device upon application of sufficient force to the switch button by the user (F_{1A} , F_{2A} and column 3, lines 23-25), the switch button being movably coupled to the housing so as to move about a fulcrum (1). Giles describes an invention that resembles the claimed invention, however Giles never explicitly stated that the positioning of the fulcrum needed to be nearer to the distal end than the palm end of the switch button. The exact positioning of this fulcrum is a design variable that is not essential to the workings of the invention. There is no disclosed criticality as to require the fulcrum to be positioned in the claimed locality. The position of the fulcrum is a design variable that can be adjusted accordingly by one skilled in the art for the usability of the device.

Claim 9 is dependent on claim 5, and is rejected on the terms similar to the discussion outlined above. In addition, Giles describes a spring beam (361) having a first end and a second end, where the spring beam is coupled to the switch button (105) through the fulcrum (1) at the first end and coupled to the housing at the second end through a second fulcrum (113).

In reference to claim 6 and 10, Giles does describe, a first force applied to the switch button to actuate the electronic switch at the distal end (F_{1A}) and a second force is required to be

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applied to the switch button to actuate the electronic switch at the palm end (F_{2A}), however he does not explicitly disclose that the first force needs to be greater than the second force nor does he describe the magnitude of the forces required. Giles does not explicitly state that the first force must be greater than the second force, however it can be inferred from the invention that such a relation is imbedded in the invention. Giles created this mouse to accommodate the different hand sizes of both adults and children (Column 1, lines 37-40). On average, adults have larger hands and more likely to have stronger hands and fingers than children. According to the figures and description of Giles, pressing the button from position of force (F_{1A}) would be more difficult requiring more force since pressing the button from F_{1A} creates an indirect non-planar torque to activate the internal switch (column 4, lines 36-40). Clearly, more horizontal force would be needed to generate the necessary torque to activate the switch designed to be activated in a vertical fashion.

In reference to claims 7-8 and 11-14, the remarks presented with respect to claims 5,6 and 10 above, apply to these claims as well. There is no disclosed criticality to these particular design specifications in the invention. The exact amount of force (as well as relative amounts of force) is a matter of routine design choice. One of ordinary skill in the art would know the types of values of these forces to make a mouse device work. The same argument goes for specifications in claims 12-14

Claims 15, 16, 19 and 20 are rejected on the same merits discussed in the rejections of claims 5 and 9 with further understanding that Giles also discloses a plunger (115) coupled to the switch button and extends towards an electronic switch (109), with the plunger configured to actuate the electronic switch upon application of sufficient force to the switch button by the user

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(column 3, lines 23-25). Also by referring to figure 3, the plunger extends through the spring beam (361). Finally, as disclosed in Giles (column 1, lines 8-9) his invention is a computer mouse.

Claims 17 and 18 are rejected on the same merits as outlined in the rejections for claims 7-8 and 11-14.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,417,842 to Shattuck. Concept of additional torque for different sized hands.

US 3,324,268 to Adams. S-shaped spring beam configuration

US 5,898,424 to Flannery. Variable force required to press mouse buttons.

US 3,564,182 to Habecker. S-shaped spring beam switch/button

US 3,953,697 to Teichert. A dual fulcrum switch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 703-305-3885. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

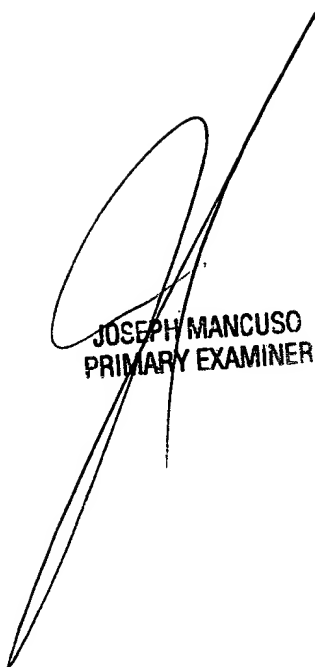
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Ming-Hun Liu

November 26, 2002

A large, stylized handwritten signature in black ink, consisting of a large loop and a long, sweeping stroke.

JOSEPH MANCUSO
PRIMARY EXAMINER